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ABSTRACT

This is a progress report of a curriculum development project aimed at involving students in community and regional development by creating an awareness of urban problems and instilling a sense of positive self worth and capability which will stimulate active community participation. Initial planning of the project is reported in ED 055 017. The work of the project team has been concentrated in three areas: 1) development of simulation activities and related background materials; 2) increase in knowledge of urban phenomena by teachers and students and a continuing consideration of available resource materials and educational processes; and 3) itemization of significant types of case studies. A series of eleven units of studies are included. Each deals with urban studies (planning, growth, environmental factors, political and social phenomena, the relationship between urban and rural areas, etc.), and lists activities and materials or any special conditions needed. Included in the appendices are an annotated bibliography of some simulations tested, instructional outlines for student projects, evaluation procedures, and the budget. Outside activities related to the project involving developers are listed. Two working papers detailing future goals and activities are appended. The emphasis is on involvement of additional teachers and the promotion of school community relationships to encourage student participation in community problems. (JMB)

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SP005152

CANADIAN URBAN DYNAMICS PROJECT.

WINNIPEG, MANITOBA.

July, 1972.

Western Curriculum Project on Canada Studies

CANADIAN URBAN DYNAMICS

A model for Student Involvement in the Urban Setting
with the support and funding of:

Project Canada West
The Canadian Studies Foundation
The Seven Oaks School Division
The Winnipeg School Division
The Manitoba Department of Education

Team Members:

Richard Harbeck — West Kildonan Collegiate, Seven Oaks School Division.

Brian Chappell -)
Jim Nowell -) Churchill High School, Winnipeg School Division.
Brian Trump -)

July, 1972.

FOREWORD.

In the report presented to Project Canada West in June, 1971 we indicated that our work would be concentrated in three major areas during the next year of curriculum development. As planned, our concentration has been on the following three key areas:

1. The development of and experimentation with simulation activities and related background materials.

2. The increase in our knowledge of urban phenomena with research work in the field, by ourselves and our students, and a continuing consideration of available resource materials and educational processes.

3. The itemization of significant types of case studies.

We have done this.

In the following pages will be found our model for the past year's activities and a guide for next year's work. Included in this model will be a brief re-statement of our objectives, sketches of eleven units of work to accomplish these objectives, and an indication of evaluation procedures and materials needed.

It should be noted that our work during the past year has been influenced by inputs of processes, ideas and materials from our Project Canada West colleagues at past conferences - especially the Media Workshop (June 1971) and the Edmonton Conference (March, 1972).

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INTRODUCTION.

This proposal is a collection of ideas, processes and ideals that have developed over the past two years through work undertaken by a team of four Winnipeg teachers committed to developing new curricula models and learning processes. These teachers are: R. Harbeck of West Kildonan Collegiate Institute, B. Chappell, B. Trump and J. Nowell - all of Churchill High School.

For the purpose of this written proposal it has been felt necessary to include the following:

1) The objectives of Canadian Urban Dynamics (as presented to Project Canada West, August, 1971) by this team of four teachers mentioned above.

2) A description of the Units of Study that will be involved in this course at West Kildonan Collegiate as conducted by R. Harbeck.

3) A listing of the materials, books and special conditions that will be necessary to achieve effective execution of the whole program.

4) Several appendices which include examples of instructions for project submissions, evaluation procedures, and bibliographies of the print materials and non-print materials that are to be used.

OBJECTIVES OF CANADIAN URBAN DYNAMICS*.

The situation, as it appears from our experience in the classroom, is that a majority of students exhibit signs of non-involvement in community life and also of isolation from the urban environment. We feel that this is a result of three main factors.

Firstly, too many students have had little cause for concern, involvement or responsibility toward their cities and communities.

Secondly, many students do not recognize their capabilities and worth as individuals and, therefore, do not contribute effectively to the group, whether it is their own classroom or in their wider community.

Thirdly, it is intended that the planned processes will positively influence public attitudes toward the student's and the school's role in society. It is no longer sufficient to regard a school student as one who views society from the enclave of the school without touching the city and community.

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*These objectives were first presented to the Canadian Studies Foundation August, 1971, by the four team members mentioned above, and are the basis for the planning of this proposal.

With these beliefs in mind, this model recognizes the existence of two intended learning outcomes:

1) acquisition of intellectual concepts, skills, and knowledge.

2) attitudinal change and development on the part of the student, but also of the community.

It is our belief that Canadian students can develop a deeper sense of identity with their urban environment if they become aware of its functions and dynamics. The process we are considering is to help the students more readily perceive the environment in which they live, then proceed to develop an appreciation of as many aspects as possible of their own community, and finally to relate the value and situation of their immediate urban environment to the wider areas, urban and rural. These wider areas can be provincial, national, and international.

The information and materials necessary to help students develop knowledge and intellect can be obtained in a variety of ways. Many materials, both general and specific, are continually appearing on the market. It is our job to evaluate and to select the most appropriate of these materials at any point in time. We are also intending to develop materials that will satisfy our immediate needs (e.g. simulation games). Our students develop materials too; these may be used in their own immediate situation though they often can have a much wider applicability.

Three major types of activities are considered pertinent to our program. These are the use of simulation games, the development and use of community case studies, and research work in the field. These three types of activities will be completely integrated and are not sequential.

The intellectual concepts which are developed with a particular class, group of students, or an individual, will vary according to the needs required. The recognition of the particular needs may be the result of an instrument(s) developed by the team. (This could be developed by a team member in a graduate program). The need for developing such an instrument is two-fold - there is no instrument of which we are aware that measures the Canadian scene and it would be more advantageous to have an instrument that fits our own particular model. A competent teacher is a diagnostician and must be able to recognize the needs of his particular students more so than our team can do. The major disciplinary concepts that we will develop are listed in our full report to Project Canada West June, 1971. However, we are convinced that the disciplines, independently of each other, do not seem to provide satisfactorily the primary source for our activities. The urban environment as the integrating factor, is itself the source. The general concepts that we see ourselves developing are:

1) Alternative policies (decision-making processes) which are evident in four areas:

a) political
b) socio-cultural
c) economic
d) personal spheres

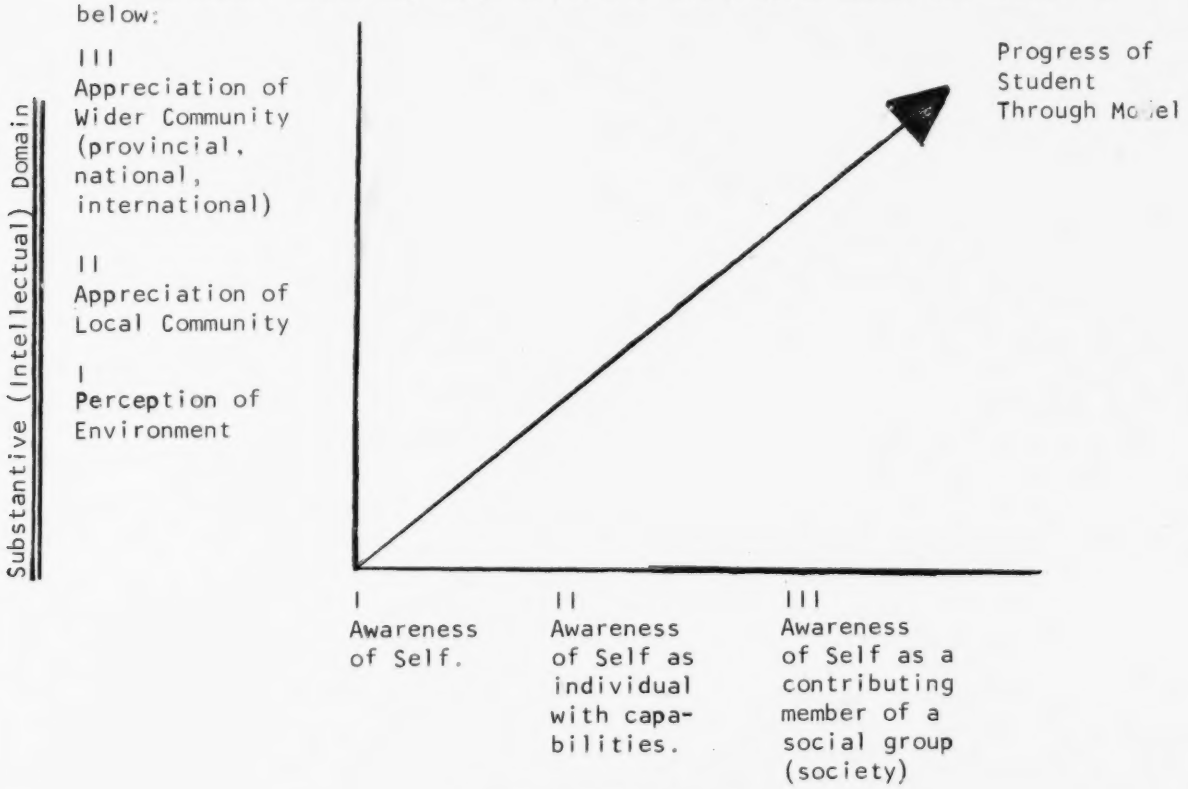
2. Vested interest.
3. Historical perspectives.

The three basic priorities in this above regard are:

1) Interdependence - all factors of urban environment affect everyone.
2) integration - data from a wide range of sources fitted into identifiable patterns.
3) Communication - sending and response to stimuli.

Attitudinal changes and development will be more difficult to realize and to measure. Nevertheless, we feel it could well be the key component in our model. Individual attitudes could be measured by an instrument before and after involvement in the program. (Again this could be developed by one of us in a graduate program for the reasons mentioned previously). The process of bringing about attitudinal change is to help the student become more aware of himself as an individual, to make him aware of his capabilities as an individual, and to help him as an individual to become aware of his contribution to the groups or society of which he is a member. This, of course, has many implications, such as developing skills for decision-making and student involvement in community life.

A crude model, which may help to portray the program described above, is below:



INTRODUCTION TO PLANNED UNITS OF STUDY.

What follows is a series of eleven phases, or investigations that would be undertaken. It should be noted that these eleven units are not of equal importance or are they necessarily integral to the next.

According to the class involved a selection of these units would be undertaken. Each unit is intended to represent the basic objectives of the Urban Dynamics Course. These eleven units should be interpreted as containing the items on the menu the teacher in this case acting as dietician.

Unit A should not be interpreted as being ranked first or Unit K ranked last although at times these units are ranked in the proper order. Each unit offers an open-ended series of activities and can be modified to suit a wide range of student abilities and interests.

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Unit A

Awareness of the Environment

Activities:

a) A series of individual exercises based on developing sensory skills.
b) Recognition exercises in the immediate urban environment.
c) Group dynamics.

Details:

a) A number of exercises are contemplated to bring to the attention of individual students the ways in which we perceive our environment. Visually, a study of symbols, around us, studies of slides, item recognition as well as personal commitments to state what is beautiful or unsightly. Additionally with sounds and smells a recognition through experimentation that our senses are selective.

b) Short ventures into the environment of the community (on foot). Recording of experiences in various ways, camera (35mm), written memos, and evaluation sessions in class. Comparison of the environment of a park to that of a high density traffic and business area, (eg. Point Douglas vs Kildonan Park).

c) This activity would be conducted by a grade XI or XII student if possible (as this has been successful in the past). Concentration would be on development of group identity, also an encouragement into creative thinking. Exercises would include meditation, mind-stretching ideas, taste exercises and tactile practice. Other exercises would be selected from a series of activities undertaken in extracurricular MTC workshops and in a previous geography classes. If time permits the game Star Power would be suitable here.

Materials and Special Conditions Needed:

1. Use of school bus (for one afternoon).
2. Two rolls (100 ft.) B. and W. Panatomic-X ($20.00).
3. Two B. & W. positive developing kits ($12.00).
4. Services of one Grade XI or XII student for 3 afternoons (optional).
5. Set of 4 books and slides titled "Looking and Seeing."
6. One 35mm slide projector.
7. One 35mm film strip projector.
8. Manitoba Telephone System films (optional).
9. One 16mm projector.
10. Star Power Game.
11. Six 35mm cameras.

Unit B

Generalizing and Categorizing Urban Phenomena

Activities:

a) Picture analysis.
b) Topographic studies.
c) Projection of self into the environment.
d) Review of books and film material on urban areas.
e) Defining the terms "city" and "urbanization".
f) City Location and Growth Activity and New Orleans Activity from (HSGP.)

Details:

All of these exercises would probably be most suitable at the "beginning" of a study of urban areas and processes. Students would look generally at the sort of information material that is readily available to them and start to make general statements about urban areas quite randomly. This sort of general survey would be followed by a categorization of all the observations using headings such as "places of residence," "places of service," and "communication links."

These types of activity are most successful as group activities in which students can compare their finding and reach collective agreement on the categories and the components of each category.

Materials and Special Conditions Needed:

1. Sets of magazine pictures of Urban and Rural settings.
2. Graffiti boards.
3. Text - A Regional Geography of North America 2nd Ed. - Tomkins.
4. Exercise - "I know that a place is a city when it has....."(see Unit E).
5. Text - Wolforth and Leigh, Urban Prospects (40 copies).
6. Study of Slides and the Slides with script "Man and His Environment In Harmony and In Conflict" from Humanities Inc. (cost $89.75).
7. Activities 1 and 2 from the HSGP kit Geography of cities. The MacMillan Co. ($465.00) for class of 40 students.

Unit C

Comparison and Contrast of Canadian Cities

Activities:

a) Choosing a number of Canadian cities that represent all of the various geographic regions of Canada. Justifying choice of cities as typical of their region.
b) Analyzing location quotients and the reasons for differences. (Reasons to include the various components such as history, function, size, site and situation).
c) Application of generalizations to each of the cities chosen.
d) Case studies of various cities from the social, political and historical context.

Details:

All the above exercises will have students recognize that characteristics of cities differ due to many factors but, in spite of this, the general characteristics of cities remain the same. Cities have distinctive functions based on their location and the above exercises attempt to get students to determine what these functions are.

Materials and Special Conditions Needed:

1. Text Urban Prospects (Set of 35) see Unit B.
2. Pictures, maps, statistical data, newsclippings related to cities chosen for analysis and generalization.
3. Text - A Regional Geography of North America; 2nd Ed. - Tomkins, G.
4. Collected News articles - audio tapes and possibly new materials that will be developed during June, July and August 1972 in conjunction with an Opportunities for Youth Project and a Project Canada West Bus trip to Vancouver. (Sponsored by Seven Oaks S.D.)
5. Text, Urban Landscaped, Eric Winter, 20 copies.

Unit D

Study of the local district

Activities:

a) Map study of the local area.
b) Investigation of the local area through field studies.
c) Organizing patterns from investigations, interviews, and statistics.
d) Case studies, keying in on such things as land usage, and dynamics.
e) Simulations - eg. Reconstruction of local area.

Details:

a) Students will undertake extensive case studies of the various functions of the local area such as 1) places of residence, 2) places of industry, 3) places of service, and 4) places of recreation. The information compiled will be obtained by various means - from personal investigations to information obtained from census tracts.

b) These investigations will be carried out separately or in conjunction with the exercises in (a) above. Compilation of information would follow such activities as measuring traffic flow at various hours during the day, interviews with people concerned with traffic patterns and problems.

c) Traffic patterns for the whole community could be integrated from several such studies as described above.

d) A case study would be an in-depth study of a selected local situation. One such study could be the investigation of recreational facilities for the elderly in the community. A hypothesis would be set up, it will be investigated, material synthesized, and a report prepared comparing hypothesis with investigated facts.

e) Simulation will be used to illustrate local land use decisions. West Kildonan will be reconstructed following a bombing attack destroying all but the underground service lines and people. The students will be assigned the task of reconstructing the suburb using provided information and materials sufficient to make a map model.

Materials and Special Conditions Needed:

1. Note that the materials are varied. For example, such materials as Community Committees Maps, large scale metro base maps, tapes such as Winnipeg Rapid Transit Report, Metro Development Plans, student camera resources, and source books such as Urban Landscapes and History of West Kildonan are to be used.
2. Some excursions should be made into the community, however these should provide little difficulty in terms of release time from their other teachers because of the short durations of these activities.
3. Large Scale maps from Uni-City (200': 1") $32.00 per class.
4. Materials gathered from governmental sources.

Unit E

Generalizing about your own city

Activities:

a) Completing the statement "I know Winnipeg is an urban area because it has.....?"
b) A study of all material available in classroom on Winnipeg.
c) Field trips to observe functions of the city and the relationship of component parts of Winnipeg.

Details:

a) Introducing students to the process of making generalizations about their own city, of a simple nature, at first, then increasing the difficulty (see unit B).

b) A study of materials available includes; newsclippings, metro publications and maps, Telephone Book, Manitoba Economic Atlas, Department of Industry and Commerce information, articles from news media. Making of generalizations from these and then classifying these under category headings such as "places of recreation," and communication services.

c) Field trips would be of two types; one undertaken by individual groups to check out some of the generalizations made in (b), the second type of field trip would be an inductive bus trip along a pre-planned route to observe and varify hypotheses already made and also to arrive at new hypotheses. (Please see apendix C for futher information regarding format for report writing.)

Materials and Special Conditions Needed:

1. Gathered materials news clippings, tapes, slides, government publications.

2. Metro bus for ½ day ($35.00). This is necessary because school bus windows frost over.

Unit F

Operation of a city in view of social, economic and political functions

Activities:

a) Commando Raid
b) Functions of Winnipeg
c) Field trip
d) Case studies and Field Work
e) Government role in the operation of a city

Details:

a) Commando Raid - a simulation that requires a group of students to knock out or control the key functions of a city for a specified time. In order to carry this out effectively the students have to learn what are the key functions of the city, where they are located, how they operate, and how they can as commandos control them. These functions include a broad spectrum of economic, political and social features of our city. Materials used would have to include such things as topographic maps, city maps, the telephone book, the city directory, information on essential services, information on government services, and census statistics.

b) Functions of Winnipeg - refer to Generalizations about own city, Unit E.

c) Field Trip - refer to Generalization about own city, Unit E.

d) Case Studies and Field Work - a case study could be a detailed study of some aspect of the operation of the city. An example is a study of the cost of services of a residential area. Other case studies in mind would be:

   1. materials related to the social-political impact of building freeways (material on Spadina Expressway is available).
   2. The Selkirk Avenue citizen's protest.
   3. West Kildonan Residents objection to development of low rental housing in their area.

e) 5 class groups assigned one task each to put down on paper their list of various functions of various government bodies. Students would undertake the following task. To answer the following "As residents of West Kildonan we expect the following to be undertaken for us by (a) the Federal Government (b) the Provincial Government (c) the Uni-City Government (d) the West Kildonan Uni-City Community Council (e) local organizations, ie. Legion, Kiwanis, etc." The concluding and key activity would be checking findings and biases with respective authorities involved.

Materials and Special Conditions Needed:

1. Materials as used in Unit E plus additional materials of same nature.
2. Special group case study sessions, interview and appointment facilities, and one afternoon excursion to function specified by groups.
3. Various Provincial, Federal and Municipal Acts related to services of these Government bodies.

Unit G

Growth of the City in the Natural Environment

Activities:

a) Study of growth patterns of 3 or 4 large Canadian Urban Areas.
b) An analysis of the growth of Winnipeg in the past 10 years. Also the growth of the community in which the school is located.
c) Game One and Two of New Town.
d) A field investigation of land use, planning and administration.
e) Selected discussions based on materials on urban growth.

Details:

a) Making generalizations on growth patterns, then a comparison to three well accepted theories of urban growth. City shape and Structure Activity 4 H.S.G.P.
b) An analysis of the growth of Winnipeg in the past 10 years (using new and old topographic maps) and news articles.
c) In this game students become real estate developers and build a city of residential, commercial and industrial components. A major objective is to arrive at the conclusion that there is a need for the public sector in establishing land use priorities other than residential, commercial and industrial use.
d) This would be in the form of investigations in small groups of the role of the following in land use decisions in the city.

    1. City planners
    2. Architects
    3. Private organizations and citizens
    4. Engineers
    5. City government

Materials and Special Conditions Needed:

1. Topographic maps and photographs of the Winnipeg, Montreal, Toronto and Vancouver areas, (new and old) $20.00 per class.
2. New Town Game ($50.00).
3. Growth Studies of Toronto, Montreal and Winnipeg.
4. Selected news articles and audio-visual materials.
5. One afternoon for interviews or contact in the field with the city planning department etc.
6. Large scale maps and air photos of the local community. (see Unit D)
7. Geography in our Urban Age Unit 1 - Geography of Cities from the High School Geography Project (H.S.G.P.) (see Unit B).

Unit H

Interdependence of Rural and Urban Areas in a Specific Geographic Region

Activities:

a) An analysis of the dependencies that people in an urban environment have.
b) Noting those urban dependencies that are life supporting and categorizing all.
c) Analyzing how these life support systems are met in the Rural Environment;

   1. Using available knowledge of class members as well as resource materials.
   2. Making a one day field investigation in a rural community (e.g. Beausejour). Use of a free question technique as well as a structured questionnaire.

d) Analyzing how rural and urban areas are interdependent (post field trip activity).
e) Sizes and Spacing of Cities from the H.S.G.P. kit. Activity 5.

Details:

Class discussion, group discussion and analysis will take place in the classroom. This will be the basis for the field investigation that is the major part of this activity. Finally, the focus on the interdependence of urban-rural areas through discussion and report writing (see appendices Card D).

Materials and Special Conditions Needed:

1. Facilities of a School bus for one day. (9:00 a.m. - 3:00 p.m.)
2. Collected newsclippings and articles.
3. Southern Manitoba-Page-Carvalo Regional Analysis ($25), statistical data and maps.
4. Some left-over unused film materials for field investigations mentioned in Unit C.
5. Audio tapes on Rural Communities such as Morden, Esterhazy, and tape on the communication networks of Canada.
6. Activity 5 from H.S.G.P. kit on Geography of Cities (see Unit B).

Unit I

The City and its Effect on the Natural Environment

Activities:

a) Case Studies
b) Simulation Games
c) Role playing - decision making
d) Field study bus tour (this will tie in work for Unit J also)
e) Relationships Matrix

Details:

a) Case studies would involve selected readings, analysis of audio tapes, related to topic (see appendix C).

b) Games included here would be:

1. New Town (game one and two) modified (using more sophisticated base map data and Canadian municipal government principles).
2. Pollution Game.
3. Extinction Game.

An anotated bibliography in June 1971 report to Project Canada West explains these games more fully (this is included as Appendix A).

c) Role playing-decision making. Placing students in the position of decision makers related to environmental disputes. e.g. a model-clean Environment Commission.

d) This bus tour would be INDUCTIVE to a large extent with a prepared study guide for major portions of the tour. Slides would be made of major items for study purposes upon return to school.

e) A study of the relationship of natural and urban phenomena using the concept of correlation and a simple matrix analysis.

Materials and Special Conditions Needed:

1. New Town Game (see Unit G).
2. 2 copies of "Pollution Game" ($22.00).
3. "Extinction" Game 2 copies ($22.00).
4. Metro Transit bus ½ day ($36.00 for ½ day), (frost free windows needed).
5. Various selected news articles and print materials for case studies and debates.

Unit J

Priorities in the City

Activities:

a) Simulation games
b) Role playing
c) Statements for debate
d) Field study-bus tour (this will tie in concepts from Unit I)
e) Journalistic investigations

Details:

a) It is planned to use a modified version of the Future game dealing with consequences of future decisions. Also a less complex game involving the making of a map of a hypothetical city based on priorities in the areas of industry, residences, transportation, government services, and food production.

b) Role playing (focus on decision making). Placing students into a position of making decisions and establishing their priorities in groups of 4 or 8 or 12 persons. e.g. deciding on needs for automobile facilities in the downtown area (Roles, 1. Downtown Merchants Assn. 2. Pollution Probe, 3. Governmental Representatives and 4. Property owners)

c) Debates (short, 1 class induration), to be set up on such topics as
- Be it resolved that no more agricultural land be devoted to the expansion of our city.
- Be it resolved that automobiles be banned from the downtown area.

d) See previous Unit I.

e) If a particular local dispute of our urban nature is taking place at the time of the involvement in this unit then students would be asked to investigate the situation themselves (Checking on all parties involved themselves, and their reporting to class). e.g. the dispute over location of low rental housing or the establishment of a new bus route.

Materials and Special Conditions Needed:

1. Game of Future modified (this is now being done).
2. Interrelationship of city functions map simulation (this is now being done).
3. Materials for specific case studies and debates.
4. A local dispute in community.
5. Text, Urban Landscapes, Eric Winter, 20 copies (see Unit C).

UNIT K.

Simulations of City Environments.

Activities:

a) Simulations showing relationships of functions in a city (Individual Work).

b) Simulations showing the priorities in the areas of industry, residence, ecology, etc. (Group Work).

c) Hypothetical City-Environment specified by students.

d) Developing hypotheses on the above and verifying theories in the field.

Details.

a) This simulation activity is in the final stages of development. It is to be used to establish in students concepts of interrelationship between functions as researched in the field in previous units. (see Unit J).

b) Included in this activity would be the use of the Portsville activity from the High School Geography Project. Here students build a hypothetical port city on the basis of historical information.

c) This is a final stage. Hypothesising is in the form of model building of a city by the students. Three different approaches are to used for eventual comparison purposes.

(i) Games 3 and 4 of New Town.
(ii) Use of topographic sheets and student's own materials.
(iii) Use of the Portsville Materials.

d) Comparison of results in (c) above.

Throughout this culminating activity hypotheses would be recorded and verified by checking with existing conditions in our city. (see appendix C).

Materials and Special Conditions Needed.

1. H.S.G.P. Portsville Kit (see previous units).
2. Topographic sheets ($15.00 per class) of various physiographic regions and non-urban areas.
3. New Town game (see previous units).
4. Two or three half-day periods for investigations in community away from school.

These simulations and the post-simulation debriefings are perhaps some of the most significant activities that the students will undertake in this program. The first activity has students individually working out the relationships that exist between the major functions that prevail in the urban

environment. Then, the class is divided into six groups. Each of these groups has a special area of interest* and will fully research it by contacting and visiting various people and establishments in the city. After this sort of investigation process the group will determine the standards and the priorities that it feels must be adhered to and meet in the building of a hypothetical city. One member from each of these groups now meets with one member from each of the other groups until six new groups, each with representatives from the specific interest groups are formed. The new groups then have the task of "building a city". They are each given a different topographic map to work with and will use the standards and the priorities set out earlier to build their city on the given map, using their collective knowledge, colored pencils, paper, glue, etc. A group report is also expected upon completion of model.

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*These for us are: Residential, Industrial, Environmental, Food Production, Transportation, and Government Service.

BIBLIOGRAPHY.

APPENDIX A.

1. Bellan, Ruben C., The Evolving City, Vancouver, Copp Clark, 1971.

Dr. Bellan reviews the historical, geographical, and technological factors that have influenced greatly the development and growth of the European-American city. His analyses of those services that the city provides for its inhabitants as well as its outside sphere of influence points out the importance of wise and effective urban administration. The book considers the role of cities in national development and the evolution of public policy in regard to urban growth.

No solutions to urban problems are offered for these, according to Dr. Bellan, are bound to be personal and non objective. The Evolving City is written to furnish readers with elements helpful in the formulation of views and approaches of their own.

2. Billings, W.D., Plants and the Ecosystem, Belmont, California, Wadsworth Publishing Co.

Although oriented toward botanical studies this book provides us with an insight into the nature of ecosystems and the relationship of man's welfare to the existing ecosystems.

3. Carver, H., Cities in the Suburbs, Toronto, University of Toronto Press, 1962.

A Canadian analysis of suburbs, their growth and problems. The stress is on attitudes toward shaping and planning land use and resources.

4. Hall, Peter, The World Cities, World University Library, Toronto, McGraw-Hill Book Co.

Hall focuses on seven major world metropolitan centres. It suggests a method of analysis of problems and a viewing of the similarities in solutions which on a smaller scale would be very useful applied to Canadian Urban Centres.

5. Kormondy, E.J., Concepts of Ecology, Englewood Cliffs, New Jersey, Prentice-Hall, Inc. 1969.

Kormondy develops his concepts of ecology by searching into the nature of things, asking questions, analyzing data, generalizing and predicting. The unifying theme is the structure and function of ecosystems, with reference to energy flow, nutrient cycling, population growth and regulation, and community organization and dynamics. This book traces many of our major social problems, such as population and pollution, and shows how these problems demand an understanding of man's relationship to his environment.

6. Lynch, Kevin, The Image of the City, Cambridge, Mass., The M.I.T. Press, 1960.

A source book of ideas for evaluating the form of the city. The need to recognize and pattern our surroundings is so crucial and is so well rooted in the past, that recognition of this pattern has wide practical and emotional importance to the individual.

7. Marsh, Leonard, Communities in Canada, Toronto, McClelland and Stewart Ltd., 1970.

Marsh has provided a vast array of case studies, field exercises, and a multitude of their approaches to aid students. He stresses the need to close the gap between technological advances in our economy and the urban political process which must govern it.

8. Tietze, F.J. and McKeown, J.E., The Changing Metropolis, Boston, Houghton Mifflin Company, 1964.

A useful series of papers on the problems of the big city in North America. You might find its case studies of social-urban problems interesting.

9. Postman, N. and Weingartner, C., Teaching as a Subversive Activity, New York, Delaconte Press, 1969.

A book devastating to traditional classroom methods. Valuable in clarifying process alternatives. A better guide to humanizing our work in schools will be hard to find.

10. Putnam, G.R. et al, A Geography of Urban Places, Toronto, Methuen, 1970.

This advanced level geography book is a collection of papers by urban geographers, planners, and economists.

11. Raser, John R., Simulation and Society, Boston, Allyn and Bacon Inc. 1969.

This book is designed to introduce social scientists to a sphere of activity with which they may not be familiar; that of simulation and gaming. It is particularly designed for undergraduate and graduate students in sociology, history, political science, psychology, economics, and anthropology; disciplines in which the simulation technique is becoming a major research and teaching device.

12. Terry, Mark, Teaching for Survival, New York, Ballantine Books, 1971.

Mr. Terry considers the ecology of the natural environment. He offers to teachers valuable creative suggestions to develop sensory awareness in students and teachers.

13. Whittaker, R.H., Communities and Ecosystems, Toronto Collier MacMillan Canada, Ltd., 1970.

The aspects of ecology that are dealt with in this book are integrated around the concepts of communities as assemblages of different species with one another and ecosystems as functional systems formed by communities and their environments. Communities and Ecosystems deals with the structure of natural communities, the functions of ecosystems, and the problems of man's relation to the biosphere.

14. Whyte, William H., The Last Landscape, Garden City, N.Y., Doubleday and Co., 1970.

A source book of views on the urban sprawl of today. Whyte presents many alternatives for dealing with the urban problems and situations that we are too often willing to put aside.

Every chapter suggests ways of looking at, understanding and getting involved in our city communities.

15. Winter, Eric, Urban Landscape, Scarborough, Ontario, Bellhaven House Ltd., 1969.

Designed for Canadian students starting a study of the urban area. The teacher's role throughout is cast as co-ordinator of student learning activities. This book stresses observation of economic, sociological and historical phenomena.

16. Wolforth and Leigh, R., Urban Prospects, Toronto, McClelland and Stewart Ltd., 1971.

Structure of Canadian urban themes presented in a well-organized fashion. Many varied field activities and exercises that are aimed at developing observational skills and techniques of urban study.

17. Park and Burgess, The City, Chicago Press, 1967.

18. CBC Learning Systems Tape Catalogue, Box 500, Terminal 'A', Toronto.

19. The Journal of Geography - a publication of the National Council for Geographic Education - 111 W. Washington Street, Chicago, Illinois - 60602.

20. Wagner, R.H. Environment and Man, Norton and Company - New York, 1971.

21. Claiborne, R. Climate Man and History, Norton and Company, New York, 1970.

22. Axworthy, D. Ed., The Future City, University of Winnipeg Press, 1971.

23. Ridgeway, J. The Politics of Ecology.

24. Rowland, K. Looking and Seeing (set of 4 books), Ginn and Company Limited, London, England.

25. Ehrlich and Ehrlich, Population Resources and Environment, Reewan and Company, 1970.

26. Dansereau, P. (ed) Challenge for Survival, Columbia University Press, 1970.

27. Environmental Geology, Harper and Row, New York, 1970.

BIBLIOGRAPHY OF SIMULATIONS TESTED

APPENDIX B.

1. Callahan, Caswell, McClellan, Mullen and Savage: Urban Dynamics, originally published as Ghetto: The Urban Race Game (Urbandyne, 5659 South Woodlawn Ave., Chicago, Illinois 60637).

   Most games of this nature stress economics and land use. This is a game where groups interact in a power struggle for control of a city government. The historical perspective is an important concept in this game. Although the game has no fixed objective and is open ended in nature, some important concepts in addition to the above are considered, including population increase, education, employment, social security and taxation. Significantly a large group can participate in this game - the larger the better. Most students enjoy the chance to negotiate loans with banks, establishment of welfare payments, costs of transport, property tax, and electing of a city council.

2. Helmer, Dr. Olaf et al Future (Oakland, Cal., Kaiser Aluminum and Chemical Corp., 1966)

   The purpose of the game is to anticipate probable events of the future. The game requires player's active participation in dealing with three factors which simulate possible models for forecasting and planning the future:

   1) the known, yet continuously changing probability of events; and

   2) the possible human influences on events; and

   3) chance.

3. Hubbell, Stephen P., Extinction: The Game of Ecology (Stamford, Conn.: Sinauer Associates, Inc. 1970)

   The game is a simplified model of nature that develops an appreciation for the ecological interdependence of all living things. Each player or team plays the part of a species whose goal is to survive while its rivals become extinct. Extinction simulates several ecological events - some natural and others caused by man.

4. Lawson, Barry R. New Town: An Urban Land Use and Development Game, (Convent Station, New Jersey 07961: Box 95, 1969).

   New Town is a gaming model which can be converted into a complex device which stimulates and encourages an understanding of many of the important development and land use questions facing contemporary urban planning officials every day. It is essentially an economic game, which does not deal effectively with social and aesthetic values of people and political groups. The game affords an opportunity for players to learn where a consideration of these values is relevant in the development process.

5. Rasmussen, F.A., The Pollution Game, (Burlington, Mass.) Houghton Mifflin Co., 1971)

   This game, developed by Educational Research Council, allows students to simulate, in a game, the progressive contamination of our environment. During this game, students will experience the antagonisms and frustrations of trying to change technology and social behaviour.

THE OBJECTIVES AND PROCEDURES FOR PROJECTS SUBMITTED IN GEOGRAPHY

APPENDIX C:

ORDER OF PROCEDURE

1. To define a specific topic or object of study related to Urbanization.

2. To produce your ideas related to the topic studied. This will in most case mean putting down in writing your BIASES (off the cuff analysis of topic). This part is important, do not neglect it.

3. To include into your paper relevant quotes, news clippings, paraphrased articles with references given and other discovered or written fictional information. Remember, give a bibliographic reference for all material included that is not yours.

4. To arrange an investigation of your topic, either with the use of field investigations, interviews, the use of extensive visual observations or the study of non-print sources. (e.g. video tapes, audio tapes, opinion polls or surveys).

5. To make a full organized report of field or special investigations made in #4.

6. Make an evaluation of the key ideas and the progression of ideas as you went through steps 1 to 5. Remember that the objective here is to produce a piece of work that will be used by students next year either,

   a) as source material in further research

   b) as an item which needs updating or validation

   Remember that each of these steps comprises an integral part of the project and must be fully treated and reported.

STUDENT PROBLEM DESCRIPTION PROCEDURE

APPENDIX D

1. Choose area of concern from the urban environment.

2. a) Indicate the present state under the heading "What Is".
   b) Indicate the preferred state under the heading "What Ought To Be".

3. a) Indicate by writing all that you presently know about "What Is".
   b) Indicate as much as you can about "What Ought To Be".

4. Ask yourself the following questions with regard to your topic.

   a) Have you included something about the background or development of your area of concern?
   b) Have you included something about how different groups in society feel and think about your area of concern?
   c) What effect does your topic have on costs to individuals, groups or government?
   d) Are there areas in the city where your area of concern is more obvious than others?
   e) Have you included something about how government is or should be dealing with the situation?

5. After applying the above questions to your work, indicate the areas in which you are lacking information.

6. Suggest possible sources and means for acquiring the information you are lacking.

   Use: Group analysis form

7. Summarize your work into a project outline which indicates:

   1) your topic
   2) problem statement
   3) present knowledge
   4) knowledge lacking
   5) method of acquiring knowledge

This problem description technique courtesy of "Central City" Project Britania School, Vancouver.

EVALUATION PROCEDURES

APPENDIX E:

Each student will be responsible for an evaluation folder and in it keep a record of all the work done during the year. This evaluation folder has the following information for each activity:

a) The title of the activity.

b) A description of the nature of the activity.

c) A description of all the work done in relation to the objectives that are established at the onset of the activity.

d) An evaluation of the work done. This evaluation is both objective and subjective in nature. Students note the things that they have learned specifically in terms of the objectives that were set earlier. The student makes a decision as to whether or not the objectives have been met for him. The students comment on the relevancy of the activity to their overall work, their likes and dislikes, and a host of other comments that are felt by the students to be of importance in the evaluation stage.

    Anyone who wants to know exactly what the students are doing and how they are progressing are referred to the student's evaluation folder.

e) Students also keep two other folders. These are their daily work books for notes etc. as well as casual findings and assignment folders that keep special individual assignments.

BUDGET

APPENDIX E

Summary of Material, and Special Conditions Needed.

The following table indicates the needs of this course as planned. Cost estimates are given where possible.

1.	School Bus 1½ day (a one day and one-half day)	N.C.
2.	Film 2 x 100' rolls Panatomic-x-	20.00
3.	Developing Chemicals for film x 2	12.00
4.	Looking and Seeing Series 4 books and slides	available at R.C.
5.	Star Power Game	
6.	Text, Regional Geography of North America Tomkins 40 copies	320.00*
7.	Text	
8.	Multi Media Kit, Man and His Environment Urban Prospects, Wolforth and Leigh 20 copies	180.00
	In Harmony and In Conflict, Humanities Inc.	89.00
9.	H.S.G.P. Unit 1, Geography of Cities	465.00*
10.	Text, Urban Landscapes, Eric Winter,20 copies	100.00
11.	Large Scale Maps of Winnipeg (200' to 1") 4 sets	36.00
12.	Metro Bus (2 half days)	68.00
13.	Bus tickets (4 x 35)	12.00
14.	Purchase of Special Gont Publications	64.00
15.	Topographic Maps of 4 Canadian Cities 4 sets	24.00
16.	Growth Studies of 4 major cities	40.00
17.	One telephone for interviews and making arrangements for field studies (10 months)	100.00
18.	New Town Simulation Game	50.00*
19.	Page Carvalo Regional Analysis	25.00*
20.	60 Cassette tapes (C-60)	120.00
21.	Listening Station (8 head phones)	available at R.C.
22.	2 Playback Cassette Recorders	120.00
23.	12 Video-tapes (12 x 30 min)	160.00
24.	Flat-topped desks	to be purchased by school.
25.	2 Pollution Games	22.00*
26.	2 Extinction Games	22.00*
27.	Future Game	obtained from Kaiser Aluminum
28.	Regional topographic Sheets (35 sheets)	15.00
29.	SCM copying services	available at School Board

30.	Construction materials for building models - glue (white and muscillage) - scissors - construction paper - ¼" plywood - paint - felt pens	120.00
	- Total foreseeable cost for materials, etc.	2,084.00
	- Expenses already undertaken either by school or by Project Canada West	904.00*
	- Revised Total foreseeable cost for materials	1,180.00

OUTSIDE ACTIVITIES RELATED TO OUR PROJECT.

Some related activities that have come about because of our involvement in Project Canada West are:

1. The Canadian Studies Foundation Conference - February, 1972.

   Brian Chappell's attendance at the C.S.F. Conference (October, 1971) had a large bearing on our emphasis on process development and its transfer. We are pursuing our next phase of work on ideas that crystalized from this contact with the Canadian Studies Foundation. Two working papers related to this topic are attached to this report.

2. The Manitoba Teachers' Society Social Studies Conference - October, 1971.

   We had a chance to present a cross-section of our ideas, materials, and processes. We feel that a positive impact was achieved due to the participatory approach taken. We will continue this emphasis on the involvement of participants in our future in-service and dissemination work. Those people that indicated interest in Canadian Urban Dynamics have been contacted for future pilot programs.

3. Portage la Prairie Curriculum Development Course
   (The Manitoba Teachers' Society and the Manitoba Department of Education.

   Along with our fellow P.C.W. team members (Indian/Metis), we had a chance to present our views. We dealt with evaluation procedures, involved participants in some representative activities from our work, and introduced the aims and objectives of Project Canada West. Again we had a chance to involve people in pilot work for next year - our year of dissemination.

4. Specific Presentations at the University of Manitoba.

   We have had several opportunities to present our views and approaches to curriculum development at the University of Manitoba; specifically Brian Trump through Course 730 (Curriculum Construction) and Brian Chappell through Course 551 (School Administration). As in #3 this has given us a further chance to find and meet teachers interested in our work and P.C.W.'s. Some of these teachers will join us in further work in 1972-73.

5. Contact with the Department of Education.

   For the next year Jim Nowell will be acting as a consultant and staff facilitator to six Differentiated Staffing Projects sponsored by the Manitoba Department of Education. From this we are anticipating getting further teacher involvement in our curriculum work, and also specific services from the Department of Education.

6. The Manitoba Teachers' Society Sponsored Public Relations Workshop (March, 1972)

Representative members from all sponsoring bodies, as well as the press, were invited to attend a special dinner and workshop at which we, and our fellow Manitoba-P.C.W. colleagues, were able to introduce our work and ideas. We feel that this was a valuable public relations exercise which has already brought us further contacts - especially with the media.

7. Churchill High School Staff Proposal in Curriculum Development.

This was a specific curriculum proposal involving the entire Churchill High School staff in submitting a proposal to the Educational Research Branch of the Department of Education. The initiation of this proposal came from the efforts of our Canadian Urban Dynamics Team.

8. Education Conference (March, 1972).

We experimented with an approach to understanding the complexities of an Urban Environment by using the Edmonton International Airport as a simulated Urban Environment. We feel that this approach and process was successful in helping people understand these complexities. The analogy to a complex urban environment is easily seen, and thus we have found it useful in the classroom.

9. Values and Social Conflict in Education.

We are acting as consultants this summer to a Post-Graduate course with the above title at the University of Manitoba Faculty of Education (organized by Dr. T. Morrison). Our involvement here is directly related to contacts we have been able to make through our work in Project Canada West.

10. Special Student Activities.

Richard Harbeck was able to extend P.C.W. activities by undertaking a two-week Greyhound bus investigation of Western Canadian communities with thirty-five students. Three other P.C.W. teams gave valuable assistance. This undertaking met its stated objectives, and a full report will be published with the intention of encouraging this type of activity by all Project Canada West teams. It should be noted that had P.C.W. not been in existence this venture would not have been contemplated.

Seven of our students participated in P.C.W.--C.S.F. sponsored exchange. They were able to use investigation techniques developed during a year's work with us in their investigations of three cities - Victoria, Quebec and Ottawa.

Thirty Churchill High School students attended a conference sponsored by the Community Planning Association of Canada (Manitoba Division). The topic of the conference was "Regionalism: Community and I". Their contribution to the conference was influential and commendable.

Further to the foregoing activities, eight students from West Kildonan Collegiate have been awarded an 'Opportunities for Youth' grant to prepare:

1) processes 2) student materials and 3) case studies

related to Canadian Urban Dynamics. At the time of writing this report, and after two weeks of work, it can be reported that the walking tours, bicycle investigations, case studies, and files of materials have exciting potential for next year's work.

CONCLUSIONS - Our contact with other agencies and future events.

We have, in the past, worked on a basis of two days per month release time for the administration of our project. This arrangement has worked well and our school divisions assisted P.C.W. by sharing substitute costs on a 50-50 basis.

During the next year there will be some changes due to the individual commitments of each team member.

Brian Chappell will be working on the Project five days per month - costs 50-50 - on a shared basis with P.C.W. and the Winnipeg School Division.

Jim Nowell will be working five days per month on the Project shared on a 50-50 basis with the Manitoba Department of Education and P.C.W.

Brian Trump will be taking a sabbatical year, and half of his time will be devoted to P.C.W. work on a shared basis with the Winnipeg School Division and P.C.W.

Richard Harbeck will take two days a month under the present formula.

We can claim the involvement of other agencies on an increasing scale. As has been noted, the Department of Education is increasingly involved in our work. The Manitoba Teachers' Society is stepping up their involvement through our participation in their workshops and professional development courses.

Our own school divisions are continuing to support our work.

As has already been noted, we are able to contribute our ideas through various courses at the University of Manitoba's Faculty of Education. Brian Trump's thesis proposal has been accepted on the basis of his past P.C.W. work.

We are being aided by community agencies, organizations and businesses which further encourages us to have our students come in contact with the community.

Next year through the involvement of other teachers in our work and consequently their school divisions, we will naturally become more concerned with evaluation procedures and the process of dissemination and further experimentation.

WORKING PAPER 1.

CANADIAN URBAN DYNAMICS - 1972-73.

CANADIAN URBAN DYNAMICS is a project that attempts to do two basic things. The first is to develop in teachers and their students the attitude that they can and should develop their own materials and approaches to the study of urban areas - using the city and all that it has to offer as the prime resource materials. The second is to help teachers and students gain an understanding as well as an empathy for the functions of urban centres and their people by participating dynamically in and with these various functions.

To accomplish these two main goals the team has worked out a number of exercises that lead people to developing things for themselves. It has also developed aids and has pointed out the existence of other aids and their sources that may help in this overall process.

In its future plans the team is considering the following plan:

a) To take a small group of about ten or fifteen teachers within a fifty mile radius of Winnipeg and get them started into the type of activities that our team has been involved in over the past two years or so.

b) To get out into the field to work directly with teachers, administrators, and students in their home schools and communities.

c) To provide continuing consultation services for those persons with whom we are working.

d) To continue to develop materials and processes in line with the objectives of the project.

e) To produce materials and the descriptions of the processes that we have and to continue with curriculum development activities that will meet the needs of teachers, students, and administrators who are to be involved in a, b, and d above.

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WORKING PAPER 2.

CANADIAN URBAN DYNAMICS....Proposal to P.C.W. and C.S.F. February, 1972.

1. That the materials, teaching strategies, techniques, approaches, innovations, ideas and creative thoughts that have resulted in part due to the influence of the C.S.F. on the various project groups be transmitted to educators by the members of the various sub-projects on a direct personal contact basis.

2. That the processes, materials, approaches and the like be adopted by the "consumer" with the idea that the adoption will be something dynamic, leaving room for the educators to follow the same developmental procedures as the team members or to develop new ones in relation to curriculum development, and that this attitude to C.S.F. materials be encouraged.

3. That project personnel act as advisors, consultants or "helpers" to other educators interested in developing such an approach, rather than merely disseminators of materials.

4. That curriculum development in the area of Canadian Studies based on the "continuing concerns" involve teachers from the start and that teachers new to the process be able to capitalize on the experiences of the C.S.F. team members.

5. That the budget for the 1972-73 school year allow for experimentation in this area.

6. That this experimentation take place in the schools in an "on-going" way rather than in a series of in-service sessions that would take students and teachers out of their home community situations.

7. That C.S.F. do all in its power to allow this sort of development to snowball, to change, to grow --- to be dynamic.

POSSIBLE PROCEDURES.

1. Teams of curriculum developers move around from school division to school division and work directly with other teachers who are adopting the materials for use in their specific situations.

2. That this procedure be preceded by an experimental period which would have a curriculum development team work for a year with teachers within fifty miles or so of its base of operations.

3. Curriculum development teams would set themselves up as advisors to the teachers in two above.

4. These teams encourage teachers to remain in contact with other teachers to give them the opportunity of getting out to see "how the other half lives".

5. In continuing development and growth of the teacher oriented curriculum development idea an emphasis should be placed on school community relationships that would have students become more alive and influential in the character of the community in which they live and that experimentation in how this might best be done take place in the above mentioned processes.

6. All teachers concerned with curriculum development in this way convince Departments of Education that this is a worthwhile process to support. (By worthwhile process we mean teachers involved in curriculum development). By improving the education process in Canada teachers might also improve the study of Canada.

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